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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,238	07/22/2003	Stefan Zimmer	HAWE-51-107	7560
26875	7590	02/15/2005	EXAMINER	
WOOD, HERRON & EVANS, LLP 2700 CAREW TOWER 441 VINE STREET CINCINNATI, OH 45202			COLE, LAURA C	
			ART UNIT	PAPER NUMBER
			1744	

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,238

Applicant(s)

ZIMMER, STEFAN

Examiner

Laura C Cole

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,5 and 9-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5 and 9-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1, 4, and 5 are objected to because of the following informalities:

Claim 1 Line 2, it appears that there is a typographical error and that the word "bristly" is meant to be "bristle." Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Metwally, USPN 6,490,747.

Metwally discloses the claimed invention including a dental brush comprising a bristle field (25) having bristles disposed in an annular arrangement (see Figure 2) wherein the length of the bristles of the field decrease from the external radius of the field to its center (see Figure 3). The toothbrush is inherently used for brushing/cleaning teeth with or without fillings (as it is a "toothbrush", toothbrush defined as "A brush used for cleaning teeth" by *The American Heritage® Dictionary of the English Language*,

Art Unit: 1744

Fourth Edition Copyright © 2000 by Houghton Mifflin Company) and engages the tooth, and actuates the brush for rotary movement (Column 2 Lines 14-15).

3. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Fischer et al., USPN 6,092,252.

Fischer et al. disclose the claimed invention including a dental brush comprising a bristle field (12) having bristles disposed in an annular arrangement (see Figures) wherein the length of the bristles of the field decrease from the external radius of the field to its center (see Figures 1-6). The bristle field extends over the entire surface essentially (see all Figures), the toothbrush is inherently used for brushing/cleaning teeth with or without fillings (as it is a "toothbrush", toothbrush defined as "A brush used for cleaning teeth" by *The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company*). Fischer et al. discloses a method that includes obtaining a dental instrument, engaging the tooth with the bristles of the brush and actuating the brush for rotary movement (Column 1 Lines 26-34, Column 2 Lines 1-17).

4. Claims 1 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al., USPN 5,996,157.

Smith et al. disclose the claimed invention including a dental brush comprising a bristle field (see bristles of Figure 7) having bristles disposed in an annular arrangement (see Figures) wherein the length of the bristles of the field decrease from the external radius of the field to its center (see Figure 7). The bristle field extends over the entire surface essentially (see all Figure 7), the toothbrush is inherently used for

Art Unit: 1744

brushing/cleaning teeth with or without fillings (as it is a "toothbrush", toothbrush defined as "A brush used for cleaning teeth" by *The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company.*)

Smith et al. includes a method of obtaining a dental instrument such as the one mentioned above, engaging the convex surface of the tooth with the bristles of the brush, and actuating the brush for rotary movement (Column 1 Lines 33-54, Column 3 Lines 21-27).

5. Claims 1 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoffman, USPN 1,890,943.

Hoffman discloses the claimed invention including a dental brush comprising a bristle field (18) having bristles disposed in an annular arrangement (see Figures) wherein the length of the bristles of the field decrease from the external radius of the field to its center (see Figure 3; Page 1 Lines 88-91). The bristle field extends over the entire surface essentially (see Figure 3), the toothbrush is inherently used for brushing/cleaning teeth with or without fillings (as it is a "toothbrush", toothbrush defined as "A brush used for cleaning teeth" by *The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company.*) Hoffman includes a method of obtaining a dental instrument such as the one mentioned above, engaging the convex surface of the tooth with the bristles of the brush, and actuating the brush for rotary movement (Page 1 Lines 60-91).

6. Claims 1 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Hadden, USPN 2,161,349.

Art Unit: 1744

Hadden discloses the claimed invention including a dental brush comprising a bristle field (6 and 7; Column 2 Lines 6-12) having bristles disposed in an annular arrangement (see Figure 6) wherein the length of the bristles of the field decrease from the external radius of the field to its center (see Figures; Column 2 Lines 6-12). The bristle field extends over the entire surface essentially (see all Figures), the toothbrush is inherently used for brushing/cleaning teeth with or without fillings (as it is a "toothbrush", toothbrush defined as "A brush used for cleaning teeth" by *The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company.*) Hadden includes a method of obtaining a dental instrument such as the one mentioned above, engaging the convex surface of the tooth with the bristles of the brush (see Figures 4-5), and actuating the brush for rotary movement (Column 2 Lines 22-26).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al., USPN 6,092,252 in view of Bachmann et al., US 2001/0016308.

Fischer et al. discloses all elements above, however does not include a specific bristle material.

Art Unit: 1744

Bachmann et al. disclose a teeth polishing device that comprise a fiber that is an aramide fiber such as KEVLAR® (Paragraph 29) including abrasives (Paragraphs 23-24) for polishing teeth (see also Paragraph 31). It is also noted that this device is used for polishing of teeth and fillings (title).

It would have been obvious for one of ordinary skill in the art to modify the bristle fibers of Fischer et al. to comprise an aramide fiber and abrasives, as Bachmann et al. teach, since these materials are advantageous in polishing teeth and fillings.

8. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al., USPN 6,092,252 in view of Fattori et al., USPN 6,347,425.

Fischer et al. discloses all elements above, however does not include that the brush is applied to a convex surface of the tooth or applying a prophylactic paste to the bristles.

Fattori et al. discloses obtaining a dental brush having bristles disposed in an annular arrangement (see Figures 1-2), the bristles having lengths that decrease from an external radius of the arrangement to a center of the bristle arrangement (see Figures 3-5), engaging a convex tooth with the bristles and applying a prophylactic paste (or toothpaste, as prophylactic is defined as "acting to defend against or prevent something, especially disease; protective" according to *The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company*), to the bristles (Column 3 Lines 51-61).

Applicants Arguments

9. In the response filed 21 December 2004, the Applicant contends that:

None of the cited references teach or suggest a dental brush comprising bristles disposed in an annular arrangement. None of the references of record teach or suggest an annular arrangement of bristles wherein the length of the bristles decreases in a direction from an external radius of the bristles toward the center of the bristle arrangement. Furthermore, Bachmann et al., nor any other reference of record teaches or suggests a modification of Fischer et al. that cures this deficiency.

Response to Arguments

10. Applicant's arguments filed 21 December 2004 have been fully considered but they are not persuasive.

On Page 7 of the response, the Applicant states that the amendment to claim 1 incorporates the subject matter originally recited in claim 2. However, the Examiner does not agree. The new limitation in Claim 1 that the bristles are "disposed in an *annular* arrangement" was not originally recited in claim 2 or described in the Applicant's specification. The term "annular" is defined as "Shaped like or forming a ring" according to *The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company*. The Examiner relies upon the Applicant's drawings to provide support of the bristles being disposed in an "annular" arrangement. As mentioned above, Hadden, Metwally, Fischer et al., Smith et al., and Hoffman do in fact disclose a dental brush comprising a bristle field having bristles disposed in an annular arrangement, wherein the length of the bristles of the bristle field decreases from the external radius of the bristle field to its center.

Conclusion

Art Unit: 1744

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C Cole whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J Warden can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1744

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LCC

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11 February 2005

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